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CELL AND SOLAR CELL****Publication Classification**(51) **Int. Cl.****H01L 31/00** (2006.01)**H01L 31/18** (2006.01)**H01L 21/20** (2006.01)**H01L 21/22** (2006.01)(52) **U.S. Cl. 136/256; 438/57; 438/478; 438/542;
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(57)

ABSTRACT

The present invention is a method for manufacturing a solar cell by forming a pn junction in a semiconductor substrate having a first conductivity type to manufacture a solar cell, including at least: applying a first coating material containing a dopant onto the semiconductor substrate having the first conductivity type; and performing vapor-phase diffusion heat treatment to form a first diffusion layer in a region applied with the first coating material and a second diffusion layer, which is formed next to the first diffusion layer through vapor-phase diffusion, with a conductivity lower than a conductivity of the first diffusion layer at the same time, and provides a solar cell. Hence, it is possible to provide a method for manufacturing a solar cell, which can manufacture a solar cell at a low cost in a simple and easy way while suppressing surface recombination in a light-receiving surface other than an electrode region and recombination in an emitter to increase photoelectric conversion efficiency of the solar cell, and a solar cell.

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